

What is a SMART GRID?

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James Campbell



National Energy Technology Laboratory

Vision Statement for the Modern Grid:

To revolutionize the electric system by integrating 21st century technology to achieve seamless generation, delivery and end-use that benefits the nation.

The Modern Grid

The six key goals:

The grid must be more reliable

The grid must be more secure

The grid must be more efficient

The grid must be more economic

The grid must be more environmentally friendly

The grid must be safer

Vision of The Modern Grid

7 characteristics of the Modern Grid:

1) Heal itself

- perform self assessments
(diagnostics)
- act as an immune system

2) Motivate customers to be active participant

- Demand response programs
(modify consumption based
on system capability)
- DR helps with peak and sets
the stage for plug-in hybrid

Vision of The Modern Grid

7 characteristics of the Modern Grid:

3) Resist attack

- system wide solutions that reduce vulnerabilities and that can handle multiple attacks
- improve natural disaster response

4) Provide different levels of power quality

- supply varying grades of power at different pricing levels

Vision of The Modern Grid

7 characteristics of the Modern Grid:

5) Accommodate all generation and storage options

- integrate multiple type of systems like “plug and play”, solar, wind

6) Enable markets to flourish

- more market participation through increased transmission paths, aggregated demand response initiatives

7) Optimize its assets and operate more efficiently